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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,224	07/10/2003	Jonas Lundberg	4010-30	2247

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ARLINGTON, VA 22203

EXAMINER
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VYAS, ABHISHEK

ART UNIT	PAPER NUMBER
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3691

MAIL DATE	DELIVERY MODE
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11/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/616,224

Applicant(s)

LUNDBERG ET AL.

Examiner

ABHISHEK VYAS

Art Unit

3691

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Status of Claims

1. This action is in reply to the amendment and remarks filed on 10/02/2008.
2. Claims 1, 3, 4, 6, 8, 9, have been amended.
3. Claims 12 and 13 have been newly added.
4. Claims 1-13 are currently pending and have been examined.
5. Claims 1-13 are rejected.
6. This is a second subsequent FINAL Rejection. The previous final rejection was vacated due to a typographical error.

### *Response to Arguments*

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendments have necessitated the new grounds of rejection. Examiner's interpretations and assertions are set forth with the rejections below.

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
8. **Claims 1-4, 7-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al. United States Patent Application Publication No.: 2002/0026399 in view of Roberts et al (herein after Roberts) United States Patent No.: 4,648,038.

9. **As per Claim 1**, Narayan et al disclose the following limitations:

- a matching processor having an associated memory forming one or more orderbooks wherein both fixed-income instruments paying a coupon referred to as bonds, and fixed-income instruments not paying a coupon, referred to as stripped bonds, are traded (see at least Narayan paragraphs 0012-0014, 0016, 0020, 0026, 0049).

Narayan does not disclose the following limitation. Roberts, however, teaches the limitation as follows:

- a data processing module for creating a new derived order in a bond orderbook for a bond derived from one or more orders placed in a stripped bond orderbook for stripped bonds associated with the bond in the order to increase trade matching opportunities in the bond orderbook (see at least Roberts column 3, lines 13-20; **column 4, lines 39-50**; column 6, lines 31-38).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to specifically include deriving bond prices from information related to stripped bonds. One would be motivated to do so to accurately match orders and provide the customer the required hedge or return on investment (see at least Roberts column 3, lines 40-48 and lines 52-62). It is further pointed out that Narayan (in paragraph 0026) clearly discloses an order interpretation module that receives orders, matches orders and executes a trade upon detecting a match. These are the obvious equivalents of a functional orderbook. In response to the applicant's contention that neither reference discloses or suggests matching orders. The examiner respectfully disagrees. Narayan clearly discloses an electronic database that receives stores, matches and processes orders from users (see Narayan paragraph 0022, 0026, 0029). It is also well known in the art that trading zero-coupon bonds or stripped bonds is analogous to trading bonds. Zero coupon bonds are a subset of coupon bonds. Therefore under the broadest reasonable interpretation the trading of zero coupons are interpreted similar to the trading (creating, matching, carrying out the trade) of regular coupon bonds. As presented by the claims

(bond orderbook) the difference in trading zero coupon bonds or coupon bonds is non-functional.

The functional steps are creating or forming an order, matching, aggregating and/or trading.

10. **Claims 2 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al.

United States Patent Application Publication No.: 2002/0026399 in view of Mosler et al United States Patent No.: 6,304,858 B1

11. **As per claims 2 and 7**, Narayan discloses the following limitations:

- *receiving from a trader a bond order to buy or sell a bond* (see at least Narayan paragraphs 0016, 0026).

Narayan does not specifically disclose the following limitation. Mosler, however, teaches:

- *matching said bond order against a number of stripped bonds that aggregated forms a bond corresponding to said bond order* (see at least Mosler column 22, lines 55-63; column 23, lines 20-23; lines 36-50; column 24, lines 56-67; column 25, lines 29-36, Figure 5a, 5b and ).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to specifically incorporate various units of securities that match the characteristics of the bond order and the available securities within the system. One would be motivated to do so to increase the efficiency of the trade process, reduce the element of human error through automation, provide the best possible match results for an optimum return of investment and hedge against risk (see at least Mosler column 22, lines 59-63). The rejection of the claim is based on the combination of Narayan and Mosler. Narayan clearly discloses matching received orders in paragraph 0026. Mosler teaches the aggregation of cash flows upon maturities of contracts comprising of bonds and zero coupon bonds that are used to hedge risk. It is obvious that they are utilizing the yield curve to match and combine yields upon maturities of various bond elements of a contract. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

12. **As per claims 3 and 8**, Narayan discloses the following limitations:

- *Matching the bond order against bids or offers for conventional bonds* (see at least Narayan paragraphs 0011, 0013, 0016, 0026, 0029).

13. **As per claims 4 and 9**, Narayan discloses a trading system with specified parameters for the security to be traded. Narayan does not disclose the following limitation. Mosler, however, teaches the following limitations:

- *Before the bond order is matched against the number of aggregated stripped bonds checking if there is a current price for all stripped bonds* required for the match (see at least Mosler column 22, lines 55-63; column 24, lines 28-34, 44-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to specifically include checking the current price. One would be motivated to do so to provide the best possible trading price or margin and hence a better return on the investment or trade (see at least Mosler column 24, lines 39-43). It is also well known in the art and obvious to check the latest prices before executing the trade to give the customer the best price of an option and reduce any losses. Mosler discloses checking prices (column 24, lines 25-34).

14. **Claims 5 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al. United States Patent Application Publication No.: 2002/0026399 in view of Mosler et al United States Patent No.: 6,304,858 B1 in further view of Halpern United States Patent Application Publication No.: 2002/0035532 A1.

15. **As per claims 5 and 10**, Narayan discloses a trading system with user specified parameters for the security to be traded. Narayan does not disclose the limitation below. Halpern, however, teaches the following limitations:

- *if a price exists for all required stripped bonds but one, generating a derived order for the missing stripped bond* (see Halpern paragraphs 0052, 0053, 0056, 0058).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to include matching and deriving orders for bonds and stripped bonds.

One would be motivated to do so to provide a customer with a useful method to hedge their risk or make a profit on their investment through accessing a broader range of bonds, stripped or non-stripped and/ or a combination of both (see Halpern paragraph 0002).

16. **Claims 6 and 11 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al. United States Patent Application Publication No.: 2002/0026399 in view of Halpern United States Patent Application Publication No.: 2002/0035532 A1 and in further view of Roberts United States Patent No.: 4,648,038.

17. **As per claim 6**, Narayan teaches the following limitations:

- *receiving a stripped bond order to buy or sell a stripped bond* (see at least Narayan paragraphs 0016, 0026).
- *matching said stripped bond order against existing bids or offers* (see at least paragraphs 0026, 0030, 0052).

Narayan does not teach the following limitations. Roberts however, discloses the limitations as follows:

- generating a derived bond order based on a number of stripped bond orders (see at least Roberts column 5, lines 49-52, 60-67; column 6, lines 1-13)

Narayan does not teach the following limitations. Halpern, however, discloses the following

- *forming a combination trade between all stripped bonds required for a match against said bond order, including said stripped bond order, and said bond* (see at least Halpern paragraphs 0016, 0020, 0022, 0025 and 0028).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to combine trading of multiple stripped bonds matching a bond order placed by a customer. One would be motivated to do so to optimize the trading process and to encourage quick and convenient transactions resulting in profitable returns on the investments. It would make investing in such instruments more cost effective. It would have also been obvious to one of ordinary skill in the art at the time of the invention to have generated (interpreted as

created) a derived bond order based on number of stripped bond orders to modify the bond order matching module of Narayan. One would be motivated to do so to realize benefits of coupon stripping and realizing the profits upon redeeming such securities (see Roberts column 3, lines 3-6, lines 30-35). Halpern clearly discloses forming a combination trade in Figure 4, paragraphs 0016, and 0025.

18. **As per claim 11**, Narayan teaches the following limitations:

- *receive a stripped bond order to buy or sell a stripped bond* (see at least Narayan paragraphs 0016,0022)

Narayan does not specifically teach the following. Halpern, however, teaches the following limitations:

- match said stripped bond order against existing bids or offers such that when said matching occurs for a pending bid or offer resulting from a derived order generated in response to trying to match a bond order for a bond against a number of stripped bonds and form as a combination trade between all stripped bonds required for a match against said bond order, including said stripped bond order, and said bond (see Halpern paragraphs 0016, 0025, 0028).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to incorporate specifically, means for trading of multiple stripped bonds matching a bond order placed by a customer. One would be motivated to do so to optimize the trading process for quicker and convenient transactions resulting in profitable returns on the investments. It would make investing in such instruments more cost effective. Automation would lead to less human errors as well as a high degree of accuracy in processing the orders.

19. **Claims 12 and 13 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al. and Mosler as applied to claim 2 and 7 above and in further view of Halpern United States Patent Application Publication No.: 2002/0035532 A1



- storing in a bond orderbook the bond order received from a trader to buy or sell a bond, and aggregating the number of stripped bonds in a stripped bond orderbook in response to the bond order (see at least Halpern paragraphs 0016, 0020, 0021, 0025, and 0028).
- wherein the matching includes matching the bond order with the aggregated number of stripped bonds which form the bond corresponding to the bond order (see at least Halpern paragraphs 0016, 0020, 0021, 0025-0026 and Figure 4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to expand the system of Narayan to include storing bond orders, matching them and creating new orders for bonds and stripped bonds. One would be motivated to do so to provide a customer with a useful method to hedge their risk or make a profit on their investment through accessing a broader range of bonds yields at various maturities (see Halpern paragraph 0002, 0058, 0070).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abhishek Vyas whose telephone number is 571-270-1836. The examiner can normally be reached on 7:30am-5:00pm EST Mon-Thur, ALT Friday OFF.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A. V.

Examiner, Art Unit 3691

/Alexander Kalinowski/

Supervisory Patent Examiner, Art Unit 3691